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4. (Amended) The method for producing a liquid crystal optical element according to Claim 1, wherein each of A_1 and A_2 which are independent of each other, is an acryloyl group or a methacryloyl group.

5. (Amended) The method for producing a liquid crystal optical element according to Claim 1, wherein each of n and m which are independent of each other, is from 1 to 4.

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8. (Amended) The method for producing a liquid crystal optical element according to Claim 6, wherein the two types of curable compounds have curable sites connectable to each other.

9. (Amended) The method for producing a liquid crystal optical element according to Claim 6, which contains a curable compound having a molecular weight of at least 1,000.

10. (Amended) The method for producing a liquid crystal optical element according to Claim 1, wherein the mixture contains a chiral agent.

11. (Amended) The method for producing a liquid crystal optical element according to Claim 1, wherein the mixture contains a chiral agent, and the helical pitch of the chiral agent is at least $4 \mu\text{m}$ and at most three times of the electrode gap.

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13. (Amended) The method for producing a liquid crystal optical element according to Claim 11, wherein the helical pitch is at least $5 \mu\text{m}$ and at most two times of the electrode gap.

14. (Amended) The method for producing a liquid crystal optical element according to Claim 1, wherein the mixture contains a very small amount of a curing catalyst.

15. (Amended) The method for producing a liquid crystal optical element according to Claim 1, wherein a plurality of compounds of the formula (1) wherein n and m are different, are used in combination.

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16. (Amended) A liquid crystal optical element produced by the method as defined in Claim 1.

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17. (New) The method for producing a liquid crystal optical element according to Claim 6, wherein the mixture contains a chiral agent.

18. (Amended) The method for producing a liquid crystal optical element according to Claim 6, wherein the mixture contains a chiral agent, and the helical pitch of the chiral agent is at least 4 μm and at most three times of the electrode gap.

19. (New) The method for producing a liquid crystal optical element according to Claim 18, wherein the electrode gap is from 4 to 50 μm .

20. (New) The method for producing a liquid crystal optical element according to Claim 18, wherein the helical pitch is at least 5 μm and at most two times of the electrode gap.

21. (New) The method for producing a liquid crystal optical element according to Claim 18, wherein the mixture contains a very small amount of a curing catalyst.

22. (New) The method for producing a liquid crystal optical element according to Claim 18, wherein a plurality of compounds of the formula (1) wherein n and m are different, are used in combination.

23. (New) A liquid crystal optical element produced by the method as defined in Claim 18.

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